IEEE P1564 Voltage Sag Indices Task Force – Meeting Minutes

Denver, CO
June 8, 2008 10:00 AM to 12:00 PM

Chair Dan Sabin, Electrotek
Secretary Russ Ehrlich, Conectiv Power Delivery

18 individuals in attendance.

Dan convened the meeting……
Introductions

PAR extension and deadlines (Russ to check) Tim Unruh checked, no extension approved.

Past meeting minutes (Russ can't find a copy of the Orlando, FL minutes)

Web site (Russ will update membership list & web site by the end of June 04)
Get copy of Dan's presentation to upload.
Password protected site to hold drafts's (3,4,5 & 6) Username P1564 Password sag-ind

Co Chair presentation of Draft 6 & discussion of draft 7 (major re-work).

Dan's concerns, 1564 is too long – 66 pages and will not make it through ballot.

- Have a standards section
- Have an appendix section
- Remove material that out of scope. (make the document consistent with other IEEE work)
- IAS group does not meet any more, however we still have two chairs.
- Concept to take IEEE 1366 methodologies (SAIFI/CAIDI/…..) and develop 1564 work.
    - Describe indices
    - Provide Expamples
    - Possibly have a normative (part of standard) and an informative annex (you can still make comments…committee must address, however this will not hold up the ballot) to add information that has been removed. We do not want to loose work.
        - Possible advantage due to a format that has already been improved.

Possibly write committee papers with material moved into.

Do you need to define Magnitude & Duration…..no, these have already been developed (IEC 61000-4-30) Care on the ®

# of Indices…..keep the number low
SARFIx (used in US, Canada, Worldwide) (take up to the point of mag & duration, per Randy Collins)
Sag Score (average voltage lost during and event – one utility uses the indice)

Voltage Sag Energy Index (one utility uses)
Sag Tables (discussion followed) (put in and annex)

Cigre approach to allow review of other indices to be in the document. (Appendix or section)

What's needed to compute SARFIx?

All sags at a given meter for a period

Minimum RMS Voltage – IEEE 1159.1 & IEC 61000-4-30

Nominal Voltage

L-L or L-N….what's available, combination of the six voltages.

Temporal Aggregation should not be an optional component of IEEE 1564. (What should the period be 1 minute or 5 minutes (300 s). discussions…..we would like to harmonize….have the DPQ graph to show the minor differences in temporal aggregation.

Need to know availability of meter, number of events/days available. (Sliding month, 365 days) Note that it is not recommend to scale events up….

Locations of meters (substation &/or specific customer locations)

Multiple Locations – Each monitor has it's own value…

- Simple statistics mean/median/percentile
- Weighted averages of individual locations (not used frequently)
  - Number of customers – just an estimate
  - Sub set of customers (industrial/commercial/residential)

SARFI proposed definition….

The system average rms variation index represents the average number of specified rms variation measurements events that occurred over the assessment period. For SARFIx, the specified rms variations have a voltage magnitude less that X% for voltage sags and voltage interruptions, or a magnitude greater that X% for voltage swells. SARFIx, may be weighted by the number of customers experiencing a voltage level if available.

Do we need a customer index, CARFIx?

Adding duration to the SARFI gets into ambiguous areas…..

SARFI-ITIC or SARFI-SEMI (Magnitude & duration falling below a curve)
We will rely on IEEE 1159.1 definition

Voltage sag table - IEC 61000-4-11 (expressed as count or a rate)